the impact of different time periods on symptom onset- first medical contact(SO-FMC) and door-to-balloon (D2B) time in patients with acute ST-segment elevation myocardial infarction(STEMI), to explore the importance to emergency treatment.

METHODS Retrospective analysis. Selected 151 STEMI patients sent by ambulance in the 306th hospital of PLA from 2011.08 to 2015.03, and all accept primary percutaneous coronary intervention (PCI) within 12 h after symptom onset. According to different onset time, patients were divided into three groups: A (45 patients) sleep time: 0:01-8:00; B (47 patients) working time 8:01-16:00; C (59 patients) leisure time 16:01-24:00, recording the time of SO-FMC time, D2B time.

RESULTS We found that :compared with group A, significantly more patients got first medical contact within 60min in group B and C [B (31/47) *vs* A (18/45), $P<0.05$; C (36/59)*vs* A (18/45), $P<0.05$]; Compared with group A, significantly more patients' D2B time reached the standard in group B and C[B (18/47) *vs* A (7/45), $P<0.05$; C (20/59) *vs* A (7/45), $P<0.05$]. There were no significantly difference between group B and C in SO-FMC time [B (31/47) *vs* C (36/59), $P=0.6003$] or D2B time [B (18/47) *vs* C (20/59), $P=0.6389$].

CONCLUSIONS The studies described above demonstrated that: compared with sleep time group, patients of work or leisure time group could seek medical help as soon as possible, and then reducing D2B time. there was no significantly difference between working time and leisure time group. Different onset time o could be an important predictor for emergency delays. According to different onset time, Emergency personnel could analyze the reasons for the delay to develop appropriate emergency measures as soon as possible.

GW26-e1303

Correlation between serum cholesterol and PCI-related myocardial infarction: Is HDL-C good or bad?

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OBJECTIVES PCI-related myocardial infarction is a common complication after percutaneous coronary intervention (PCI). Risk or protective factors of PCI-related myocardial infarction are complex. Serum cholesterol includes total cholesterol (TC), low density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C), non-high density lipoprotein cholesterol (non-HDL-C) and so on. The aims of our study are to explore the correlation between serum cholesterol and PCI-related myocardial infarction.

METHODS Our study retrospectively analyzed 249 coronary atherosclerotic heart disease patients accepting coronary angiography (CAG) and PCI during 2013 to 2014. The association between serum cholesterol and PCI-related myocardial infarction were explored using univariate and multivariate Logistic regression analysis, demonstrating results with odds ratio (OR). In this study, diagnosis of PCI-related myocardial infarction accorded with Third Universal Definition of Myocardial Infarction [cTnI>5×upper limit of normal value (ULN) within 48h of the procedure plus ischemic symptom, angiographic or imaging findings].

RESULTS Forty three patients suffered PCI-related myocardial infarction so that morbidity was 17.27%. After controlling of other confounding factors, LDL-C and HDL-C are both risk factors of PCI-related myocardial infarction [LDL-C: OR1.416 (95%CI1.03-1.947); HDL-C: OR3.322 (95%CI1.076-10.259)] through multivariate Logistic regression analysis. Age, complications happening during PCI operation, Gensini scores, total stents length and number of stents are also risk factors of PCI-related myocardial infarction. Multivariate Logistic regression analysis also found that TC, HDL-C, LDL-C and non-HDL-C are all risk factors of the elevation of postoperative cTnI>10×ULN[TC: OR1.508 (95%CI1.194-1.903); HDL-C: OR3.324 (95%CI1.161-9.519); LDL-C:OR1.627(95%CI1.228,2.154); non-HDL-C: OR1.458 (95%CI1.146-1.856)], cTnI>5×ULN [TC:OR1.457(95%CI1.161-1.828); HDL-C: OR3.526 (95%CI1.269-9.8); LDL-C:OR1.639(95%CI1.241-2.166); non-HDL-C: OR 1.408 (95%CI1.112-1.783)] and cTnI>3×ULN. Additionally, TC, LDL-C, non- HDL-C are risk factors for cTnI>1×ULN.

CONCLUSIONS LDL-C, HDL-C are risk factors for both PCI-related myocardial infarction and postoperative cTnI elevation, but TC, non-HDL-C only play as risk factors for postoperative cTnI elevation. Age, complications happening during PCI operation, Gensini scores, total stents length and number of stents are also risk factors of PCI-related myocardial infarction.

GW26-e1304

Prognosis of PCI-related myocardial injury or PCI-related myocardial infarction

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OBJECTIVES The prognosis of PCI-related myocardial infarction and the increased myocardial enzymes after PCI are still controversial. Moreover, factors influencing prognosis of PCI are not very clear yet. Therefore, our study aim to explore the relationship between long-term prognosis and influence factors of PCI-related myocardial infarction and the postoperatively differently increased cTnI.

METHODS Two hundred and forty-nine coronary atherosclerotic heart disease patients accepting coronary angiography (CAG) and PCI during 2013 to 2014 were recruited in our study. We compared the different MACE incidence 3 months, 6 months and 12 months after PCI between patients with and without PCI-related myocardial infarction (MACE defined as readmission, nonfatal myocardial infarction, revascularization, death. Diagnosis of PCI-related myocardial infarction accorded with Third Universal Definition of Myocardial Infarction). Kaplan-Meier method and Cox proportional hazards regression model were used as well, demonstrating results with event-free survival curve and risk ratio (RR).

RESULTS Forty three patients suffered PCI-related myocardial infarction. Mean follow-up time is 11.56±6.70 months. MACE incidence was different between PCI-related myocardial infarction patients and those without at 6 months (14.7% *vs* 3.4%, $P=0.023$) and 12 months (39.1% *vs* 6.2%, $P<0.001$) after PCI while 3 months was not statistically different. Making MACE as the endpoint during the time after PCI to March, 2015, the event-free survival rate of the patients with PCI-related myocardial infarction is lower than the ones without ($P<0.001$), while the occurrence of MACE is significantly higher in the multivariable Cox proportional hazards regression model [RR7.089(95%CI 3.064-16.402)]. Moreover, the prognosis of the patients whose postoperative elevation of cTnI >5×ULN [RR2.538 (95% CI 1.076-5.986)] or 10×ULN [RR3.065 (95%CI 1.372-6.851)] are worse than that of other patients. The prognosis of the ones whose cTnI >1×ULN or 3×ULN has no significant differences from others. Diabetes [RR 2.547 (95%CI 1.111-5.839)], NYHA classification of cardiac function [RR 2.296 (95%CI1.14-4.623)], BNP/NT-proBNP [RR 2.119 (95%CI 1.321-3.397)] are also risk predictors of the prognosis of PCI while apoA1 is independent protective factor [RR 0.054 (95%CI 0.008-0.361)].

CONCLUSIONS The prognosis of the patients suffering PCI-related myocardial infarction or postoperative elevation of cTnI >5×ULN are significantly worse than that of others. Other risk factors of PCI prognosis include diabetes, NYHA classification of cardiac function, BNP/NT-proBNP while apoA1 is an independent protective factor.

GW26-e0798

Duration of Dual Antiplatelet Therapy Following Drug-Eluting Stent Implantation: An update Meta-Analysis of Current Randomized Controlled Trials

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OBJECTIVES The optimal duration of dual antiplatelet therapy(DAPT) after drug-eluting stent implantation is unclear. With inclusion of several recent large randomized clinical trials (RCTs) including PEGASUS-TIMI54, the present meta-analysis has enhanced statistical power.

METHODS We conducted a search for RCTs from 2012 to 2015. Long term DAPT was compared with short term DAPT. Efficacy endpoints included stent thrombosis, myocardial infarction and all cause mortality. Safety endpoint was major bleeding. Odds ratios (OR) and 95% confidence intervals (CI) were computed using the Mantel-Haenszel (MH) method. Fixed-effect model was used.

RESULTS Six RCTs were included and yielded 35032 patients (17476 short term DAPT; 17556 long term DAPT). We found a significant benefit favoring long term DAPT for stent thrombosis(odds ratio [OR]: 2.31; 95% confidence interval [CI]: 1.61-3.32; p<0.00001). Compared

with long term DAPT, short term DAPT had a higher rate with myocardial infarction(OR: 1.41; 95% CI: 1.25-1.60; p<0.00001). However, the short term DAPT showed a significantly lower risk than long term DAPT with major bleeding(OR: 0.51; 95% CI: 0.41-0.64; p<0.00001). Finally, there was no difference for all cause mortality(OR: 0.93; 95% CI: 0.82-1.05; p=0.22).

CONCLUSIONS In conclusion, long term DAPT reduced the risk of stent thrombosis or myocardial infarction and increased in the risk of major bleeding. All cause mortality was marginally higher with long term DAPT without reaching statistical significance. The duration of DAPT should be individualized and delegated to the trade-off between ischemic and bleeding complications.

GW26-e1041

Comparison of two-year outcomes of repeated second-generation Drug-eluting stents implantation for focal type versus non-focal type in-stent restenosis

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OBJECTIVES Second-generation Drug-eluting stents (DES) has been widely used to treat DES in-stent restenosis (ISR) which remains a clinical challenge. Knowledge regarding the outcomes of repeated second-generation DES implantation for focal versus non-focal type ISR is still missing. The aim of this study was to compare the outcomes of repeated second-generation Drug-eluting stent (DES) implantation for focal-type in-stent restenosis (ISR) versus non-focal-type ISR.

METHODS In current study, 254 patients with DES-ISR were divided into focal or non-focal groups by their ISR angiographic types. The types of restenosis were classified into focal type (<10 mm in length) and non-focal type which includes diffuse (restenosis>10 mm within the stent), proliferative (restenosis>10 mm in length extending outside the stent) and occlusive. Primary endpoint of the study was the occurrence of major adverse cardiac events (MACEs) over a 2-year follow-up period. MACEs were defined as cardiac death, myocardial infarction and target lesion revascularization (TLR).

RESULTS Of the 254 consecutive patients, 87 were defined as focal type and 167 as non-focal type restenosis. The mean age of the population studied was 59.67±10.56 years with 79.1% patients were male. There were no significant differences in coronary risk factors between the two groups. Non-focal type group showed significantly greater incidence of MACEs than focal type group (38.3% vs. 24.1%; P=0.03). Among which, TLR occurrence was more pronounced (32.3% vs. 18.4%; P=0.02). Three patients of the non-focal group and two patients of the focal group died. Seven patients of the non-focal group and three of the focal group had myocardial infarction. However this group showed higher incidence of type B2/C lesions (69.5% vs. 41.4%; P<0.01) with longer lesion length (25.46±3.38 vs. 8.13±2.21; P<0.01) and received significantly more and longer re-implanted stents than focal type group (1.73±0.91 vs. 1.52±0.89; p<0.05; 28.59±11.246 vs. 19.47±7.094, p<0.01, respectively). The Kaplan-Meier curves showed focal group had significantly longer MACE free survival than non-focal group. Cox regression analysis indicated non-focal type ISR was an independent predictors of MACEs (odds ratio 2.134, 95% confidence interval 1.173-3.884; P=0.014) after adjusting all significant variables.

CONCLUSIONS In current study, second-generation DES is more effective in the treatment of focal type DES-ISR than non-focal type ISR in terms of MACEs occurrence. Non-focal type ISR is an independent predictor of MACEs after treatment of DES-ISR with second-generation DES.

GW26-e2280

Application of rotational atherectomy on heavily calcified unprotected left main disease

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OBJECTIVES Objective To observe the efficacy and safety of percutaneous coronary intervention (PCI) with rotational atherectomy for highly calcified unprotected left main coronary artery (ULMCA) disease.

METHODS Methods Twenty one patients with severely calcified ULMCA stenosis who were not eligible for coronary artery bypass grafting were enrolled between July 2012 and October 2014. Procedural success and major adverse cardiovascular events (MACE) including death, nonfatal myocardial infarction and target lesion revascularization (TLR) were evaluated during long-term follow-up.

RESULTS Results Twenty one patients (15 males ;mean age, 69±7 years;) with ULM stenosis were treated with RA. Of these, 61.9 % and 71.4% patients had diabetes and hypertation. The mean Euro SCORE and SYNTAX score was 5.4 and 37.2, respectively. The mean number of treated vessels was 2.56±0.91. Intra-aortic balloon pump was used in one cases. All 21 patients went through the operation successfully. The major events registered after the procedure included one case of myocardial infarction, and six minor and two major case of bleeding at the puncture point. After a median of 13.9 (IQR 6.8–23.4) months of follow-up, 1 cardiac deaths were recorded. Survival free of cardiac death was 82.3±9% and target vessel revascularization 12.1±6% at one year.

CONCLUSIONS Conclusion Rotational atherectomy followed by stent implantation, when applied to heavily calcified lesions, appeared to be a safe and effective strategy for the treatment of ULMCA disease.

GW26-e3951

Clinical analysis of coronary artery anomalies and percutaneous transluminal coronary angioplasty

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OBJECTIVES To investigate the type and the incidence of malformation of coronary artery in coronary angiography of adult population, as well as the importance of the correct choice of guiding catheter in percutaneous coronary angioplasty.

METHODS A total number of 14000 cases of coronary angiography from March 2003 to October 2014 were included in, the patients who were detected with coronary artery malformation. were analyzed retrospectively. All the cases were classified by the anatomical characteristics of the coronary artery malformation, and the guiding catheter we used in the operation were statistically analyzed meanwhile.

RESULTS 214 cases were detected with coronary angiography in all the 14000 patients who were checked with coronary angiography, thus the incidence rate is 1.53%;104 cases who were diagnosed with coronary atherosclerotic heart disease and went through the PCI operation were analyzed respectively, the results include:1 case of death, 1 case of complication, 2 cases failed, 100 cases of success.

CONCLUSIONS Coronary angiography is effective in detecting coronary artery malformation screening method, according to guiding catheter can significantly increase the success rate of PCI coronary artery in different types of abnormal selection.

GW26-e4663

The gender difference in short and long-term outcomes for coronary rotational atherectomy, a single-center retrospective analysis

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OBJECTIVES Rotational atherectomy facilitates percutaneous coronary intervention for complex lesions with severe calcification, even in the era of drug eluted stent. However, the female patients were considered with higher incidence of complications and worse outcomes. The study was to observe the gender difference in efficacy and safety for coronary rotational atherectomy in patients with severe stenosis and heavy calcific lesions.

METHODS Consecutive cases underwent rotational atherectomy from January 1, 2010 to December 31, 2014 at a single center (Fuwai Hospital) were reviewed retrospectively. Clinical and coronary angiographic data were collected. Long-term outcomes were obtained by outpatient clinical follow-up or telephone interview.

RESULTS Total 283 cases (192 male 67.84%, 91 female 32.16%) were enrolled for evaluation. The average age was 66.77±8.63 and female had a higher age than male patients. Total procedural success rate was 95.8%, and despite the higher incidence of coronary dissection (8.80% vs. 3.10%, p =0.043), female had comparable severe complications, including no-reflow, perforation or burr entrapment. However, compared with male patients, female had higher incidence of in-